=> d his

     (FILE 'HOME' ENTERED AT 15:27:50 ON 17 DEC 2007)

     FILE 'REGISTRY' ENTERED AT 15:28:00 ON 17 DEC 2007
L1   STRUCTURE UPLOADED

     FILE 'STNGUIDE' ENTERED AT 15:28:51 ON 17 DEC 2007

     FILE 'REGISTRY' ENTERED AT 15:32:17 ON 17 DEC 2007
L2   STRUCTURE UPLOADED
L3   1 S L2
L4   5 S L2 SSS FULL

     FILE 'HCAPLUS' ENTERED AT 15:33:47 ON 17 DEC 2007
L5   3 S L4
L6   3 S ABBOTT,F?/AU AND KARAGIOZOV,S?/AU
L7   3996 S VALPROIC (A) ACID
L8   2 S FLUORINATED (A) VALPROIC (A) ACID

     FILE 'STNGUIDE' ENTERED AT 15:38:46 ON 17 DEC 2007

     FILE 'HCAPLUS' ENTERED AT 15:44:27 ON 17 DEC 2007
L9   0 S "VPA OR VALPROIC (A) ACID" (S) "FLUORINE OR FLUORINATE OR FLU
L10   0 S "VPA OR VALPROIC (A) ACID" (5N) "FLUORINE OR FLUORINATE OR FL

10/539049 VALPROIC ACID ANALOGUES

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAMLL1621

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * *   Welcome to STN International   * * * * * * * *

NEWS		
NEWS 1		Web Page for STN seminar Schedule - N. America
NEWS 2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS 3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS 4	AUG 13	CA/Caplus enhanced with additional kind codes for granted patents
NEWS 5	AUG 20	CA/Caplus enhanced with CAS indexing in pre-1907 records
NEWS 6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7	AUG 27	USPATOLD now available on STN
NEWS 8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10	SEP 13	FORIS renamed to SOFIS
NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/Caplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	Caplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/Caplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/Caplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD

NEWS EXPRESS   19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

NEWS HOURS   STN Operating Hours Plus Help Desk Availability

10/539049 VALPROIC ACID ANALOGUES

NEWS LOGIN   Welcome Banner and News Items
NEWS IPC8   For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:27:50 ON 17 DEC 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 15:28:00 ON 17 DEC 2007
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES: 16 DEC 2007   HIGHEST RN 958294-65-0
DICTIONARY FILE UPDATES: 16 DEC 2007   HIGHEST RN 958294-65-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.
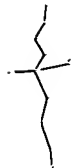
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\2007cases\10539049\formula1.str

```
chain nodes :
1  2  3  4  5  6  7  8  9  10  16
chain bonds :
1-2  2-3  2-6  2-16  3-4  4-5  5-10  6-7  7-8  8-9
exact/norm bonds :
2-3  2-6  2-16  3-4  5-10  6-7  8-9
exact bonds :
1-2  4-5  7-8
```

G1:F,H

Connectivity :
3:2 M minimum RC ring/chain 6:2 M minimum RC ring/chain
Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 16:CLASS

L1   STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1
              STR
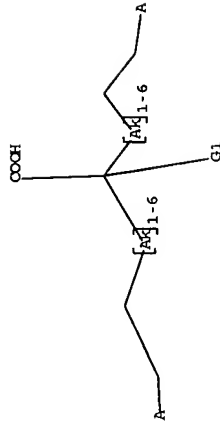
G1 F,H

Structure attributes must be viewed using STN Express query preparation.

=> s l1
GENERIC GROUP NOT VALID HERE
Generic groups may not be used in these circumstances:

1. Any generic group node (e.g., HY) in a ring.
2. An Ak node attached to another Ak node.
3. An Ak node with three or more attachments where
   one or more of the attachments is to a C node.

=> fil stng

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
	0.45	0.66
FULL ESTIMATED COST		

FILE 'STNGUIDE' ENTERED AT 15:28:51 ON 17 DEC 2007
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COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 14, 2007 (20071214/UP).

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
	0.36	1.02
FULL ESTIMATED COST		

FILE 'REGISTRY' ENTERED AT 15:32:17 ON 17 DEC 2007
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0
DICTIONARY FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.
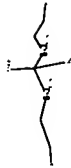
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\2007cases\10539049\formula.str

chain nodes :
1 2 3 4 5 6 7 8 9 10 16 18
chain bonds :
1-2 2-3 2-6 2-16 3-4 4-5 5-10 6-7 7-8 8-9
exact/norm bonds :
2-16 5-10 8-9
exact bonds :
1-2 2-3 2-6 3-4 4-5 6-7 7-8

G1:F,H

G2:F,H

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 16:CLASS 18:CLASS

L2   STRUCTURE UPLOADED

Page 5 12/17/07

=> d l2
L2 HAS NO ANSWERS
L2   STR
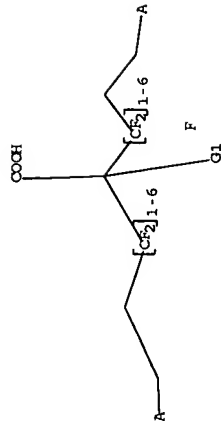
G1 F,H
G2 F,H

Structure attributes must be viewed using STN Express query preparation.

=> s l2
SAMPLE SEARCH INITIATED 15:32:39 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   444 TO ITERATE

100.0% PROCESSED   444 ITERATIONS   1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE   **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 7616 TO   10144
PROJECTED ANSWERS: 1 TO   80

L3   1 SEA SSS SAM L2

=> d sca

L3   1 ANSWERS   REGISTRY COPYRIGHT 2007 ACS on STN
IN   Octanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8,8-tetradecafluoro-2-
      (nonafluorobutyl)-, ammonium salt (9CI)
MF   C12 H F23 O2 . H3 N

NH3

Page 6 12/17/07
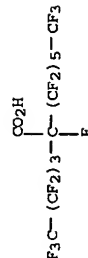
ALL ANSWERS HAVE BEEN SCANNED

=> s 12 sss full
FULL SEARCH INITIATED 15:33:04 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 7817 TO ITERATE

100.0% PROCESSED 7817 ITERATIONS (2 INCOMPLETE)
SEARCH TIME: 00.00.03

L4 5 SEA SSS FUL L2

=> d scan 1-5 ide
'1-5' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

L4 5 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
ITERATION INCOMPLETE
IN Propanedioic acid, bis(heptadecafluorooctyl)-(9CI)
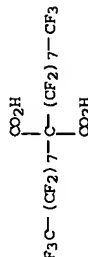MF C19 H2 F34 O4
CI COM

$$F_3C-(CF_2)_7-\overset{\overset{\displaystyle CO_2H}{|}}{\underset{\underset{\displaystyle CO_2H}{|}}{C}}-(CF_2)_7-CF_3$$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG   - RN
SAM   - Index Name, MF, and structure - no RN
FIDE   - All substance data, except sequence data
IDE   - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD   - Protein sequence data, includes RN
SQD3   - Same as SQD, but 3-letter amino acid codes are used
SQN   - Protein sequence name information, includes RN

CALC   - Table of calculated properties
EPROP - Table of experimental properties
PROP   - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB ------- AN, plus Bibliographic Data (original)
OIBIB ------ OBIB, indented with text labels

SBIB ------- BIB, no citations
SIBIB ------ IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):5

L4   5 ANSWERS   REGISTRY   COPYRIGHT 2007 ACS on STN
IN   Octanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8-tetradecafluoro-2-(nonafluorobutyl)-, ammonium salt (9CI)
MF   C12 H F23 O2 . H3 N

$$F_3C-(CF_2)_3-\overset{\overset{\displaystyle CO_2H}{|}}{\underset{\underset{\displaystyle F}{|}}{C}}-(CF_2)_5-CF_3$$

●NH$_3$
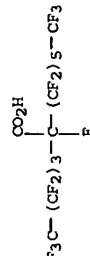
L4   5 ANSWERS   REGISTRY   COPYRIGHT 2007 ACS on STN
IN   Nonanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-2-(heptafluoropropyl)-(9CI)
MF   C12 H F23 O2

$$F_3C-CF_2-CF_2-\underset{\underset{F}{|}}{\overset{\overset{CO_2H}{|}}{C}}-(CF_2)_6-CF_3$$
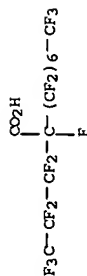
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4   5 ANSWERS   REGISTRY   COPYRIGHT 2007 ACS on STN
ITERATION INCOMPLETE
IN   Propanedioic acid, bis(heptadecafluorooctyl)-,disodium salt (9CI)
MF   C19 H2 F34 O4 . 2 Na
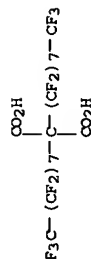
$$F_3C-(CF_2)_7-\underset{\underset{CO_2H}{|}}{\overset{\overset{CO_2H}{|}}{C}}-(CF_2)_7-CF_3$$

● 2 Na

L4   5 ANSWERS   REGISTRY   COPYRIGHT 2007 ACS on STN
IN   Octanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8,8-tetradecafluoro-2-(nonafluorobutyl)- (9CI)
MF   C12 H F23 O2
CI   COM

$$F_3C-(CF_2)_3-\underset{\underset{F}{|}}{\overset{\overset{CO_2H}{|}}{C}}-(CF_2)_5-CF_3$$
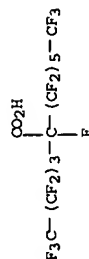
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> d his

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FILE 'REGISTRY' ENTERED AT 15:28:00 ON 17 DEC 2007
     STRUCTURE UPLOADED
L1

Page 9 12/17/07

FILE 'STNGUIDE' ENTERED AT 15:28:51 ON 17 DEC 2007

FILE 'REGISTRY' ENTERED AT 15:32:17 ON 17 DEC 2007
          STRUCTURE UPLOADED
L2
L3   1 S L2
L4   5 S L2 SSS FULL

=> fil hcapl
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                ENTRY   SESSION
                                                173.00   174.02
FULL ESTIMATED COST

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FILE COVERS 1907 - 17 Dec 2007   VOL 147 ISS 26
FILE LAST UPDATED: 14 Dec 2007   (20071214/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l4
L5   3 L4

=> d l5 1-3 ibib abs hitstr

L5   ANSWER 1 OF 3   HCAPLUS   COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:323285   HCAPLUS
DOCUMENT NUMBER: 129:16513
TITLE: Aqueous fluoropolymer compositions and their preparing
                       methods
INVENTOR(S):   Fan, Wei-qiang; Manzara, Anthony P.
PATENT ASSIGNEE(S):   Minnesota Mining and Manufacturing Co., USA
SOURCE: PCT Int. Appl., 79 pp.
                       CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9820055	A1	19980514	WO 1997-US4446	19970319

Page 10 12/17/07

$$F_3C-(CF_2)_3-\overset{CO_2H}{\underset{F}{C}}-(CF_2)_5-CF_3$$

● NH_3

REFERENCE COUNT:	5	THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 2 OF 3   HCAPLUS   COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:323170 HCAPLUS
DOCUMENT NUMBER: 129:17563
TITLE: Aqueous film-forming foam compositions
INVENTOR(S):   Stern, Richard M.; Fan, Wei-qiang
PATENT ASSIGNEE(S):   Minnesota Mining and Manufacturing Co., USA
SOURCE: PCT Int. Appl., 81 pp.
         CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9819742	A1	19980514	WO 1997-US4560	19970318
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DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,				
LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,				
PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,				
GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,				
ML, MR, NE, SN, TD, TG				
R: BE, CH, DE, FR, GB, IT, LI, NL				
US 6015838	A	20000118	US 1996-743478	19961101
CA 2269340	A1	19980514	CA 1997-2269340	19970318
AU 9725854	A	19980529	AU 1997-25854	19970318
AU 723935	B2	20000907		
EP 935486	A1	19990818	EP 1997-917568	19970318
EP 935486	B1	20011017		
CN 1239897	A	19991229	CN 1997-180300	19970318
JP 2002514240	T	20020514	JP 1998-521344	19970318
KR 2000052963	A	20000825	KR 1999-703837	19990430
			US 1996-743478	A 19961104
PRIORITY APPLN. INFO.:			WO 1997-US4560	W 19970318

OTHER SOURCE(S):   MARPAT 129:17563
AB This invention provides aqueous film-forming foamable (AFFF) compns.
    comprising one or more environmentally-friendly, -branched
    fluoroalkylcarbonyl group-containing surfactants.
IT 207678-54-4
    RL: TEM (Technical or engineered material use); USES (Uses)
    (surfactants; aqueous film-forming foam compns. containing)
RN 207678-54-4 HCAPLUS
CN Nonanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-hexadecafluoro-2-

---

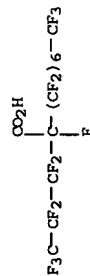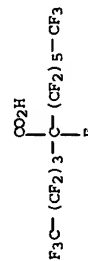|				
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,				
DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,				
LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,				
PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,				
GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,				
ML, MR, NE, SN, TD, TG				
R: BE, CH, DE, FR, IT, LI, NL				
US 5998521	A	19991207	US 1996-743573	19961104
AU 9722184	A	19980529	AU 1997-22184	19970319
EP 935621	A1	19990818	EP 1997-915175	19970319
EP 935621	B1	20011128		
CN 1239483	A	19991222	CN 1997-180208	19970319
JP 2001503801	T	20010321	JP 1998-521343	19970319
KR 2000052962	A	20000825	KR 1999-703836	19990430
			US 1996-743573	A 19961104
PRIORITY APPLN. INFO.:			WO 1997-US4446	W 19970319

OTHER SOURCE(S):   MARPAT 129:16513
AB The compns. comprise fluoropolymers, and ≥1 environmentally-
    friendly fluorinated emulsifier comprising -branched
    fluoroalkylcarbonyl moieties. The fluoropolymers are selected from PTFE
    or polyvinylidene fluoride. Methods for preparation of intermediates,
    monomers, repellent treatments, coatings, surfactants, emulsifiers, and
    aqueous film-forming foamable solns. are included.
IT 207678-54-4P 207678-57-7P 207678-73-7P
    RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
    (aqueous fluoropolymer compns. containing environmentally-friendly
    fluorinated emulsifiers)
RN 207678-54-4 HCAPLUS
CN Nonanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-hexadecafluoro-2-
    (heptafluoropropyl)- (9CI) (CA INDEX NAME)

$$F_3C-CF_2-CF_2-\overset{CO_2H}{\underset{F}{C}}-(CF_2)_6-CF_3$$

RN 207678-57-7 HCAPLUS
CN Octanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8-tetradecafluoro-2-
    (nonafluorobutyl)- (9CI) (CA INDEX NAME)

$$F_3C-(CF_2)_3-\overset{CO_2H}{\underset{F}{C}}-(CF_2)_5-CF_3$$

RN 207678-73-7 HCAPLUS
CN Octanoic acid, 2,3,3,4,4,5,5,6,6,7,7,8,8-tetradecafluoro-2-
    (nonafluorobutyl)-, ammonium salt (9CI) (CA INDEX NAME)

(heptafluoropropyl)-(9CI)   (CA INDEX NAME)

$$F_3C-CF_2-CF_2-\underset{\underset{F}{|}}{\overset{\overset{CO_2H}{|}}{C}}-(CF_2)_6-CF_3$$

REFERENCE COUNT: 5   THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
                                     RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 3 OF 3   HCAPLUS   COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:72287 HCAPLUS
DOCUMENT NUMBER: 116:72287
TITLE: Electrostatographic toners
INVENTOR(S):   Kato, Koichi; Tomita, Masani; Hagiwara, Tomoe
PATENT ASSIGNEE(S):   Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
                         CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 03223767	A	19911002	JP 1990-239980		19900912
			JP 1989-316551	A1	19891207

PRIORITY APPLN. INFO.:
AB   The toners consist of binder, coloring agent, and F-containing compound
      R1R2R3C(CF2)mCR4R5R6 [R1-6 = F, CO2H, CO2Na, CO2cnH2p+1 (p≥1),
      CO2K, CO2Li, CO2NH4, SO3K, SO3Na, -(CH2CH2O)nH, NMe3I; number of F in
      R1-6≤4; m≥2]. The F-containing compound may be
      CF3(CF2)kCF2CR7R8R9 [R7-9 = as defined for R1-6 or CF3(CF2)q (q≥2);
      number of F in R7-9 ≤2; k ≥2]. These toners do not form films
      on sleeves or on photoconductors, and do not produce fog in image.
IT   138707-62-7 138707-64-9
      RL: TEM (Technical or engineered material use); USES (Uses)
      138707-62-7 HCAPLUS
CN   Propanedioic acid, bis(heptadecafluorooctyl)-.disodium salt (9CI)   (CA
      INDEX NAME)

$$F_3C-(CF_2)_7-\underset{\underset{CO_2H}{|}}{\overset{\overset{CO_2H}{|}}{C}}-(CF_2)_7-CF_3$$

●2 Na

RN   138707-64-9 HCAPLUS
CN   Propanedioic acid, bis(heptadecafluorooctyl)-(9CI)   (CA INDEX NAME)

INVENTOR(S): pharmaceutical compositions and therapeutic use thereof
Abbott, Frank Slade; Karagiozov, Stoyan Kostadinov

PATENT ASSIGNEE(S): The University of British Columbia, Can.
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004054957	A2	20040701	WO 2003-CA1960	20031216
WO 2004054957	A3	20040910		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2508855	A1	20040701	CA 2003-2508855	20031216
AU 2003289782	A1	20040709	AU 2003-289782	20031216
US 2006223888	A1	20061005	US 2006-539049	20060331
			US 2002-433505P	P 20021216
			WO 2003-CA1960	W 20031216

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 141:65128
AB Analogs of valproic acid useful in treating neuroaffective disorders, including convulsions, bipolar disorder, and migraine headache, are disclosed. The analogs are halide-substituted analogs, cyclic analogs, and conjugated diene analogs of valproic acid. Pharmaceutical compns. or prodrugs containing the analogs or pharmaceutically acceptable salts thereof are disclosed. Methods of making the compds. and treating mammals with neuroaffective disorders are also disclosed.

L6 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:158637 HCAPLUS
DOCUMENT NUMBER: 140:423401
TITLE: Practical Stereoselective Synthesis of (2E)- and (2Z)-4-Cycloalkylidenebut-2-enoicAcids
AUTHOR(S): Karagiozov, Stoyan K.; Abbott, Frank S.
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Division of Biomolecular and Pharmaceutical Chemistry, University of British Columbia, Vancouver, Vancouver, BC, Can.
SOURCE: Synthetic Communications (2004), 34(5), 871-888
CODEN: SYNCAV; ISSN: 0039-7911
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:423401
AB Stereoselective synthesis of α,β-unsatd. esters
(E)-R1CR2:CHCH:CHCO2Et [R1R2 = (CH2)4, (CH2)5, (CH2)6, (CH2)7] and
(Z)-R1CR2:CHCH:CHCO2Et [same R1R2] was achieved through

Horner-Wadsworth-Emmonsreaction of β,β-disubstitued α,β-unsatd. aldehydes R1CR2:CHCHO (I). Thus, aldehydes I undergo olefination with phosphonate carbanion generated from tri-Et phosphonoacetate and lithium hydroxide or Bu lithium/DMPU to give (E)-α,β-unsatd. esters with excellent selectivity. The treatment of I with the new Horner-Emmons reagents, Et (diphenylphosphono)acetateand Et (di-o-tolyl-phosphono)acetatein the presence of benzyltrimethyl ammonium hydroxide (Triton B) afforded (Z)-α,β-unsatd. esters with 73-89% selectivity. The esters were converted to (2E)- and (2Z)-4-cycloalkylidenebut-2-enoicacids.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> s valproic (a) acid
        3998 VALPROIC
     4498412 ACID
     1605681 ACIDS
     5004418 ACID
             (ACID OR ACIDS)
L7      3996 VALPROIC (A) ACID

=> s fluorinated (a) valproic (a) acid
       38949 FLUORINATED
           1 FLUORINATEDS
       38949 FLUORINATED
             (FLUORINATED OR FLUORINATEDS)
        3998 VALPROIC
     4498412 ACID
     1605681 ACIDS
     5004418 ACID
             (ACID OR ACIDS)
L8         2 FLUORINATED (A) VALPROIC (A) ACID

=> d l8 1-2 ibib abs hitstr
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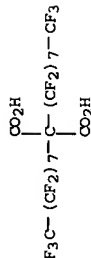
L8 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:64539 HCAPLUS
DOCUMENT NUMBER: 127:314376
TITLE: Time course of α- fluorinated valproic acid in mouse brain and serum and its effect on synaptosomal γ-aminobutyric acid levels in comparison to valproic acid
AUTHOR(S): Tang, Wei; Palaty, Jan; Abbott, Frank S.
CORPORATE SOURCE: Division of Pharmaceutical Chemistry, Faculty of Pharmaceutical Sciences University of British columbia, Vancouver, BC, V6T 1Z3, Can.
SOURCE: Journal of Pharmacology and Experimental Therapeutics (1997), 282(3), 1163-1172
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To prevent the hepatotoxicity of valproic acid (VPA), a fluorine substituent was introduced at the α-position to eliminate the formation of putative toxic metabolites through mitochondrial β-oxidation Although the α-fluorinated VPA analog (α-fluoro VPA) is more acidic (pKa = 3.55) than VPA (pKa = 4.80), the lipophilicity

of these two compds., as determined by their log P values, were similar when compared at pH 2.5. Brain, serum and urine samples were prepared from mature male CD-1 mice treated with either α-fluoro VPA or VPA for quantitation of drug concns. After equivalent doses of 0.83 mmol/kg, α-fluoro VPA was characterized by its slower access into mouse brain, compared to VPA. The peak concentration of α-fluoro VPA in mouse brain was achieved 45 min later than in the serum, whereas the peak brain level of VPA coincided with the peak serum level occurring within 15 min. Simultaneous curve fitting of both brain and serum drug concns. using a two-compartment model indicated that α-fluoro VPA, like VPA, may be asym. transported across the blood-brain-barrier. This property of α-fluoro VPA was also reflected in its low brain-to-serum concentration ratio of 0.09 at the peak brain drug concentration (0.16 for VPA). The primary β-oxidation metabolite of VPA was not found in the serum and urine of mice treated with α-fluoro VPA. Although the glucuronide was a major metabolite of VPA (28.5% of the dose), α-fluoro VPA was observed to conjugate extensively with L-glutamine (33.3% of the dose). α-Fluoro VPA appeared to persist in the general circulation, which, in turn, may contribute to the apparent slow elimination of the drug from the brain. The fluorinated compound was demonstrated to have anticonvulsant activity in the 1,5-pentamethylenetetrazoleseizure test and to be capable of increasing brain synaptic γ-aminobutyric acid, the ED50 being 1.70 mmol/kg. These results suggest that α-fluoro VPA has potential as a new anticonvulsant drug.

REFERENCE COUNT: 58   THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L8     ANSWER 2 OF 2   HCAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:    1992:214009 HCAPLUS
DOCUMENT NUMBER:     116:214009
TITLE:               Preparation of fluorinated valproic
                     acid and anticonvulsants containing them
INVENTOR(S):         Yamaguchi, Koji; Yanaka, Mikiro
PATENT ASSIGNEE(S):  Kureha Chemical Industry Co., Ltd., Japan
SOURCE:              Jpn. Kokai Tokkyo Koho, 8 pp.
                     CODEN: JKXXAF
DOCUMENT TYPE:       Patent
LANGUAGE:            Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04021652	A	19920124	JP 1990-122641	19900511
JP 2954979	B2	19990927	JP 1990-122641	19900511

PRIORITY APPLN. INFO.:
OTHER SOURCE(S):   MARPAT 116:214009

AB (CF3CH2CH2)2CHCO2H (I) and its pharmacol. acceptable salts, which show stronger anticonvulsive activity and less adverse effect than valproic acid, are prepared by treatment of CF3CH2CH2X (X = halo) with alkyl cyanoacetates, decarboxylation of resulting (CF3CH2CH2)2C(CO2R)CN(R = alkyl), hydrolysis, and optional salt formation or salt exchange reaction. Refluxing 4.74 g Et cyanoacetate with K2CO3 and 4.88 g CF3CH2CH2Br (preparation given) in DMF for 63 h gave 6.05 g (CF3CH2CH2)2C(CO2Et)CN, which (6.00 g) was refluxed with KOH and ethylene glycol for 21 h to afford 1.36 g I. I Na salt at 330 mg/kg (1.2 mmol/kg) p.o. showed good anticonvulsive effect in mice, vs. no anticonvulsive effect, for Na valproate at 1.2 mmol/kg. Oral administration of I Na salt at 1320 mg/kg (4.8 mmol/kg) to mice

caused minor motor damage, vs. severe damage, for Na valproate at 4.8 mmol/kg. I Na salt (500 mg) was dissolved in 2 mL saline to give an injectable solution

```
=> fil stng
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                ENTRY        SESSION
FULL ESTIMATED COST                             50.76        224.78
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                ENTRY        SESSION
CA SUBSCRIBER PRICE                             -6.24         -6.24

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 14, 2007 (20071214/UP).

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L1     FILE 'REGISTRY' ENTERED AT 15:28:00 ON 17 DEC 2007
                       STRUCTURE UPLOADED

FILE 'STNGUIDE' ENTERED AT 15:28:51 ON 17 DEC 2007
FILE 'REGISTRY' ENTERED AT 15:32:17 ON 17 DEC 2007
                       STRUCTURE UPLOADED
L2         1 S L2
L3         5 S L2 SSS FULL
L4

FILE 'HCAPLUS' ENTERED AT 15:33:47 ON 17 DEC 2007
L5         3 S L4
L6         3 S ABBOTT,F?/AU AND KARAGIOZOV,S?/AU
L7      3996 S VALPROIC (A) ACID
L8         2 S FLUORINATED (A) VALPROIC (A) ACID

FILE 'STNGUIDE' ENTERED AT 15:38:46 ON 17 DEC 2007

=> fil hcapl
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                ENTRY        SESSION
FULL ESTIMATED COST                              0.54        225.32
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                ENTRY        SESSION
CA SUBSCRIBER PRICE                              0.00         -6.24

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FILE COVERS 1907 - 17 Dec 2007 VOL 147 ISS 26
FILE LAST UPDATED: 14 Dec.2007 (20071214/ED)

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

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          1927 "OR"
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          3998 "VALPROIC"
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       4498412 "ACID"
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           570 "FLUORINES"
        111805 "FLUORINE"
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             0 "OR"
          1927 "ORS"
          1927 "OR"
                 ("OR" OR "ORS")
           218 "FLUORINATE"
            47 "FLUORINATES"
           264 "FLUORINATE"
                 ("FLUORINATE" OR "FLUORINATES")
             0 "OR"
          1927 "ORS"
          1927 "OR"
                 ("OR" OR "ORS")
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             1 "FLUORINATEDS"
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L9       0 "VPA OR VALPROIC (A) ACID" (S) "FLUORINE OR FLUORINATE OR FLUORI
             NATED"
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             5 "VPAS"
          1658 "VPA"
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             0 "OR"
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          1927 "OR"
                 ("OR" OR "ORS")
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      21619230 "A"
       4498412 "ACID"
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        111490 "FLUORINE"
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        111805 "FLUORINE"
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          1927 "OR"
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           218 "FLUORINATE"
            47 "FLUORINATES"
           264 "FLUORINATE"
                 ("FLUORINATE" OR "FLUORINATES")
             0 "OR"
          1927 "ORS"
          1927 "OR"
                 ("OR" OR "ORS")
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             0 "FLUORINE OR FLUORINATE OR FLUORINATED"
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L10      0 "VPA OR VALPROIC (A) ACID" (5A) "FLUORINE OR FLUORINATE OR FLUOR
             INATED"

=> d his

    (FILE 'HOME' ENTERED AT 15:27:50 ON 17 DEC 2007)

    FILE 'REGISTRY' ENTERED AT 15:28:00 ON 17 DEC 2007
              STRUCTURE UPLOADED
L1

    FILE 'STNGUIDE' ENTERED AT 15:28:51 ON 17 DEC 2007

    FILE 'REGISTRY' ENTERED AT 15:32:17 ON 17 DEC 2007
              STRUCTURE UPLOADED
L2            1 S L2
L3            5 S L2 SSS FULL
L4

    FILE 'HCAPLUS' ENTERED AT 15:33:47 ON 17 DEC 2007
L5            3 S L4
L6            3 S ABBOTT,F?/AU AND KARAGIOZOV,S?/AU
```

L7   3996 S VALPROIC (A) ACID
L8   2 S FLUORINATED (A) VALPROIC (A) ACID

     FILE 'STNGUIDE' ENTERED AT 15:38:46 ON 17 DEC 2007

     FILE 'HCAPLUS' ENTERED AT 15:44:27 ON 17 DEC 2007
L9   0 S "VPA OR VALPROIC (A) ACID" (S) "FLUORINE OR FLUORINATE OR FLU
L10   0 S "VPA OR VALPROIC (A) ACID" (SN) "FLUORINE OR FLUORINATE OR FL
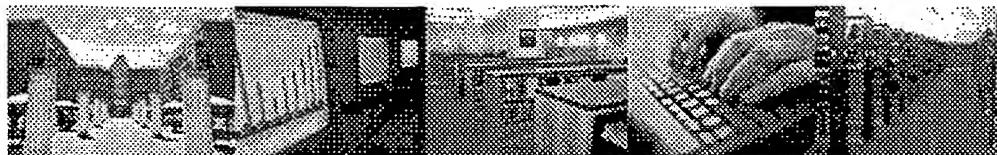
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)		
CA SUBSCRIBER PRICE	0.00	-6.24

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Office Location: REM 05C25
Phone Number: (571)272-9930
Application Number: 10/539049

Author (if known): Tang, Wei; Palaty, Jan; Abbott, Frank S.
Article or Chapter Title: Time course of .alpha.-fluorinated valproic acid
Journal or Book Title: Journal of Pharmacology and Experimental Therapeutics
Volume and issue (for articles): 282(3),
Year of Publication: (1997),
Page numbers: 1163-1172
Other Identifying Information (Edition, ISSN, ISBN, Citation, etc.): CODEN: JPETAB; ISSN: 0022-3565 ==========
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